

SPECIFICATION

Please amend the heading of the abstract as follows: --

A B S T R A C T

JOINING EXPANDABLE TUBULARS

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Please replace the paragraph starting on page 1 line 29 with the following paragraph: --

It is known from International patent application WO 98/33619 to connect expandable tubulars by amorphous bonding and from International patent application WO 0230611 to connect expandable tubulars by laser welding. However, these connection techniques are time consuming and require a very precise positioning of the pipe ends relative to each other and machining the pipe ends into an extremely accurate flat shape. ~~that~~ These technologies are not practical for use on for example a drilling rig, an offshore oil platform or pipe laying vessel.--

Please replace the paragraph starting on page 8 line 31 with the following paragraph: --

The spacing elements 13A - D may be provided with pyrometric and/or compression sensitive sensors which are able to detect the temperature of each pipe end 12A - B during the heat up phase and also the location of the pipe end 12A - B relative to the spacing element 13 and the compressive force applied by the pipe ends 12A - B to the spacing element 13. The compression sensitive sensors may comprise piezoelectric elements which are located close to the pipe ends 12A, 12B or at a selected distance therefrom such that the time difference between the transmitted and reflected vibrations is used to assess the contact point(s) and compression forces between the spacing elements 13A - D and the pipe ends 12A, 12B. --

Please replace the paragraph starting on page 16 line 1 with the following: --

The external non-destructive weld testing apparatus shown in Figures 7 and 8 include two EMAT probes 107, 108. The EMAT probes 107, 108 may be positioned either above the weld 106, below the weld 106 or, preferably, above and below the weld 106 and that they are in close proximity (typically no more than 2 mm) from the pipe wall. Each EMAT probe comprises a series of circumferentially distributed EMAT transmitter and receiver assemblies 107a, 107b, 108a, 108b. In each assembly the receiver 108a, 108b is positioned adjacent to the transmitter 107a, 107b but between the transmitter

108a, 108b and the weld 106. The stationary EMAT probes can be integrated into the external gas shield chamber 103 of the forge-welding machine (Fig.7) or into the internal spear 125 (Fig.8). --

Please replace the paragraph starting on page 17 line 10 with the following: --

When applied together with the forge-welding machine as illustrated in Fig. 7a and b the EMAT probes 107, 108 are automatically centred around the pipe wall 101, using a spring system 109, when the gas shield chamber 103 may be closed. The surfaces 113a-b, 114a-b of the EMAT transmitters and receivers 107a-b, 108a-b are protected by a thin film 112, typically a 0.1mm ~~metal~~-thick metal film although other wear resistant materials can be employed. --

Please replace the paragraph starting on page 20 line 19 with the following: --

Reference is made to Figure 11. Using novel design, use and control of meander-loop coil[[s]] elements 123 provide the option to select different modes of operation and transmission angles of the ultrasonic wave, allowing a full inspection of the entire weld all around the circumference of the pipe. --

Please replace the paragraph starting on page 22 line 29 with the following: --

The forge welded tubulars may comprise a low grade steel base pipe and a higher grade steel cladding on the inner and/or outer surface of the base pipe. In such case it is preferred that the end faces are shaped such that, when the tubular ends are pressed together, the end faces of the cladding(s) touch each other first and then the end faces of the base pipe ends subsequently touch each other. It is also preferred that any non-oxidising or reducing flush gas is introduced from the opposite side of the pipe wall to the clad layer. --

Please replace the paragraph starting on page 42 line 9 with the following paragraph: --

The unexpanded~~ing~~ tubular 501 has a diameter D2 which is at least 10% smaller [[to]]than the diameter of the expanded tubular (not shown) after expansion in the hole. The end faces 502 of the tubular are machined as per the requirements for the welding process to be applied on the rig site. The middle section of the tubular 503 is provided with slots 504 leaving solid sections 505 of pipe at both ends of the tubular.